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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/731,085	12/10/2003	David Smith	RMS-0001 CON	8700

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EXAMINER	
WARREN, DAVID S	

ART UNIT	PAPER NUMBER
2837	

DATE MAILED: 09/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/731,085	SMITH ET AL.	
	Examiner	Art Unit	
	David S. Warren	2837	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *6/22/06*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *16-65* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *16-65* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 16 – 65 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Regarding independent claim 16, the Examiner was unable to find support in the original specification nor in Application 10/137392 (now patent no. 6,696,631) for "a first data structure representing a plurality of musical pieces." Indeed, the instant specification (as well as '631) refer to "a first data structure representing ***a*** musical piece" (Abstract), "a first data structure related to ***a*** song" (paragraph [0030]), "first data structure generally represents ***a*** musical piece" (paragraph [0096]), etc. However, the specification states [0232] "these sequence files are generally files that can be characterized as the first data structure or pristine music file***s***." The Applicant has defined "first data structure" to be synonymous with "pristine file," therefore, as interpreted by the Examiner, this sentence refers to each file (or song or sequence) individually. The is corroborated in [0233]

wherein the specification states "[a]fter the sequence file for ***the*** song has been loaded, ***the*** song defaults are loaded" [Emphasis added] In other words, individual songs have individual data structures. Nor can the Examiner find where "the second data structure including instructions for selecting from among and arranging the plurality of musical pieces including arranging music on the respective tracks" is mention in either the instant specification or '631. Regarding claim 52, the Examiner cannot find support for "a first show file" nor "a second show file" and specifically where the first and second show files produce first and second modified musical outputs. It appears, to the Examiner, that the show file of claim 52 appears to perform the same function as the second data structure of claim 16. However, the specification does not appear to support any method by which a show file (the .SHO extension) modifies a MIDI file to produce modified output. Regarding claim 65, there is no support in the original specification for "embedding port information into at least one of a predetermined MIDI track name."

The MPEP 608.04 (b) states:

> A preliminary amendment present on the filing date of the application (e.g., filed along with the filing of the application) is considered a part of the original disclosure. See MPEP § 714.01(e) and § 602. **A preliminary amendment filed after the filing date of the application is not part of the original disclosure of the application**. See MPEP §706.03(o). [Emphasis added]

3. Since the Applicant's arguments appear to rely on new matter, the Examiner is going to maintain the rejections of the previous Office Action (mailed February 24, 2006).

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 16 – 24, 26, 27, 35 – 37, and 39 are rejected under 35 U.S.C. 102(b) as being anticipated by Su et al. (5,852,251). Regarding claim 16, Su discloses assessing a first data structure (MIDI file 418), retrieving a second data structure (output from processor 412 – col. 4, lines 37 – 41), wherein the second data structure modifies the first (to obtain 420), and the use of plural MIDI channels (see the paragraph bridging columns 2 and 3), and plural instruments (col. 8, first paragraph). Regarding claim 17, the second data structure is not a MIDI file (like the first), therefore it is a different format. Regarding claim 18, the second data structure of Su can be called a "show file." Regarding claim 19, the first file is a MIDI file (col. 4, paragraph 2). Regarding claim 20, Su discloses processing pitch, volume, speed, beat, etc. These features are synonymous with dynamic (beat) and velocity (volume) control. Regarding claim 21, see element 506, fig. 5. Regarding claim 22, Su's device is a "real-time" conversion (see Title), therefore, the first and second data structures are in use "at the time of the

performance" (which is the time of the converting of the MIDI file). Regarding claim 23, whenever data is converted, it can be said to be "mapped" – that is, data is not randomly or arbitrarily changed, certainly, the volume data (or any other data) that enters as 418 will be mapped to volume (or any data) data in 424. Regarding claim 24, MIDI data (and the modified MIDI data) will control exactly the number of times an event (say, the playing of middle C) will occur – this is the purpose of MIDI; to control events. Regarding claim 26, a user of the Su invention may submit a MIDI file to be modified a second time, this sequential conversion is considered to be a second data structure (because the user may select to modify the MIDI file in a different way). In other words, the sequential modification is deemed to be a second modification. Regarding claim 27, as stated supra, any MIDI data, when modified, can be deemed to be mapped. The Su reference will map volume data to new volume data and map pitch data to pitch data (col. . The plural maps (volume and pitch) will yield a single performance (i.e., a composite) map. For example, Su converts data from a MIDI file to a standard 0 type (see col. 4, lines 59 – 61) – this conversion is deemed to be *mapping*. Regarding claims 35 – 37, the Examiner is defining "entity" as a user of the Su invention. Regarding claim 39, this claim appears to embody all possible situations, (i.e., files stored together in a single file, or stored separately), Su appears to store files separately (col. 5, paragraph 1).

3. Claim 65 is rejected under 35 U.S.C. 102(b) as being anticipated by Cakewalk Professional for Windows User's Manual (version 2.0; 1993. Twelve Tone Systems). Cakewalk for Windows User's Manual (hereinafter, *Cakewalk*) allows a user to name a

track to any name, including A_flute, etc. Any system that can parse this data (see the Examiner's Response to Arguments as to why this is interpreted as admitted prior art) could send SMF files to more than one port with different information on each port.

4. Claim 52 is rejected under 35 U.S.C. 102(b) as being anticipated by Goede (5,952,598). Goede discloses a method of automatically creating alternate sequences (see Abstract). The data that creates a first sequence (a first DIF) is deemed to be synonymous with Applicant's first show file. The data that produces a "alternate sequence" is deemed to be synonymous with Applicant's second show file. The DIU file is a MIDI file (col. 5, lines 13 – 16). Goede discloses that "*each*" DIU (i.e., first and second show file) creates a plurality of DIF (first and second modified musical outputs) wherein the DIU is unmodified and wherein the plurality of DIF's are different (see Abstract).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 25, 38, 40 – 42, 44 – 47, and 50 – 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Su et al. in view of Cakewalk Professional for Windows User's Manual (version 2.0; 1993. Twelve Tone Systems). The teachings of Su have

been discussed supra. Su does not disclose the use of overriding instructions via an external or internal control, applying velocity of a tap release to an instrument property; the use of markers and hot keys; applying patch change data, measure numbers, section names, and "inertia;" and the use and storing of individual maps. Regarding claim 25, the Cakewalk User's Manual (hereinafter, *Cakewalk*) discloses the use of using MIDI instrument keys (an external control; i.e., external to the processing unit) – see pages 214 and 215. Regarding claim 38, (note the §112 rejection supra), the Examiner questions the use of "tap release velocity" – but this appears to be functionally equivalent to "after-touch" control wherein once a key is tapped, the release pressure can be monitored to perform some control of a MIDI file (see Cakewalk, page 77). Regarding claims 40 – 42, Cakewalk discloses the use of markers (pages 121 – 123), controlling events based on an external hot key (pages 214 and 215), and these hot keys can be changed based on "other parameters." Regarding claims 44 – 47, Cakewalks discloses the use of patch changing (bottom of page 55), arbitrary numbers can be inserted in the markers view (and Cakewalk allows the relocation of measures) – see pages 184, 185), markers can also be used to insert section names (pages 121 – 123). Regarding claim 47, Cakewalk does not specifically define providing "inertia" to change one parameter more slowly. However, Cakewalk provides control of all MIDI parameters and the user has the ability to control those parameters freely in any way, for example, a user can quickly alter the tempo while slowly varying the volume (compare pages 87 and 105). This appears to be functionally equivalent to the Applicant's inertia. Regarding claim 50, the limitations have been discussed supra.

Regarding claim 51, Cakewalk discloses the use of storing hot key mapping schemes – one of ordinary skill in the art would consider storing for each user of a system. It would have been obvious to one of ordinary skill in the art to combine the teachings of Su and Cakewalk to obtain a real-time MIDI controller using MIDI control parameters to modify a MIDI file (i.e., a first data structure). The motivation for making this combination is to provide the power and flexibility of MIDI standard control codes to an music file data structure.

7. Claims 26, 28 – 34, 43, 48 and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Su et al. in view of Heidorn et al. (5,693,903). The teachings of Su et al. have been discussed supra. Su does not teach the use of plural second data structures, layered mapping, weighted data, vamping, and the use of tapping data. Regarding claim 26, multiple users would generate multiple second data structures. Regarding claim 28 (see §112 rejection supra), as best as can be understood, any final recording will yield a composite map of all parameters (volume, pan, tempo, effects, etc.) within the performance (the Applicant has not defined "weighted average" in the specification). Regarding claims 29, 33, 34, 48, and 49, Heidorn discloses altering the tempo of a MIDI performance by the use of detecting a user's tap (see col. 9, fourth paragraph through sixth paragraph). The "subdivisions" are deemed to be equivalent to, say, 16^{th} notes, 8^{th} notes, quarter notes, and half notes. Thus altering the time signature from say, "three four" (tapping would yield the tempo of quarter notes) to "six eight" (tapping would yield a tempo of 8^{th} notes). Regarding claims 30 – 32 and 43, Heidorn discloses the use of creating a "vamp" or indefinite loop (col. 6, last paragraph).

This vamp appears to be MIDI controlled and would therefore have an exit command (i.e., the "stop" command or the "loop until" function).

Response to Arguments

8. Applicant's arguments filed June 22, 2006 have been fully considered but they are not persuasive. In an interview with the Applicant the Examiner indicated that the rejection of the previous Office Action (mailed February 24, 2006) would be withdrawn as a result of the Applicant's arguments (received June 26, 2006). However, the Examiner has now found that the Applicant's arguments are based on material that was not found in the original Application (including the parent 10/137392). The Applicant's response to the Examiner's rejection of claim 16 was based on Su not showing "instructions for selecting from among and arranging the *plurality of musical pieces including arranging music on the respective tracks*." The Examiner cannot find support for this in either '631 (filed as 10/137392) nor the instant specification. Therefore, until it can be shown that this limitation was part of the original disclosure, this feature will not be given any patentable weight. Likewise, for the Applicant's claim that Su does not show a first data structure "representing a plurality of musical pieces." The Applicant has explicitly and repeatedly defined the first data structure as that of a single song or piece (see Abstract). Regarding Applicant's arguments regarding claim 65, the Applicant states that he is "using a preferred embodiment syntax that is embedded in the track name (so that a track labeled A_flute would reference instrument "flute" and go

out the A port..."). It appears that the Applicant is merely naming the track and using the track's name as information to be used to direct data to a port. The Cakewalk device is certain capable of "embedding port information" into a track name, i.e., a user could easily title a track "A_flute" – furthermore, claim 65 does not claim using the title of the track name to direct data to a port. So yes, if the Cakewalk file were converted to a SMF, the port information per se would be lost, but the track name would remain. And as Applicant states (see arguments, page 27, lines 12 – 13), "[a]ny application that can parse this information can then take advantage of port information." It appears that the ability to "parse" this information is not the invention of the Applicant (since it can be found in "*any application*") – therefore, the Examiner is treating this as admitted prior art. In other words, merely renaming a track name to, say, "A_flute" is not deemed to be patentable, but within the scope of one of ordinary skill.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David S. Warren whose telephone number is 571-272-2076. The examiner can normally be reached on M-F, 9:30 A.M. to 6:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lincoln Donovan can be reached on 571-272-2837. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

dsw

LINCOLN DONOVAN
SUPERVISORY PATENT EXAMINER